



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

March 20, 2008

Mr. Ron Giraudi
TRC Solutions, Inc.
21 Technology Drive
Irvine, CA 92618

**WASTE DISCHARGE REQUIREMENTS FOR PILOT TEST TO EVALUATE
BIOAUGMENTED BIOREMEDIATION OF VOLATILE ORGANIC COMPOUNDS IN
GROUNDWATER - FORMER INTERNATIONAL LIGHT METALS FACILITY, 19200 SOUTH
WESTERN AVENUE, TORRANCE, CALIFORNIA (FILE NO. 06-001)**

Dear Mr. Giraudi:

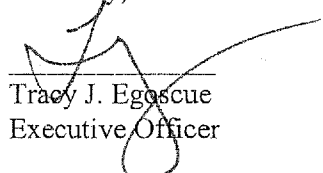
Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on March 6, 2008, reviewed the tentative requirements, considered all factors in the case, and adopted Order No. R4-2008-0009 (copy attached) relative to this waste discharge. Section 13263 (e) of the California Water Code provides that all Requirements shall be reviewed periodically and, upon such review, may be revised by the Regional Board.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this Order. All monitoring reports should be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File CI-9016 and Order No. R4-2008-0009, which will assure that the reports are directed to the appropriate file and staff. Please do not combine your discharge monitoring reports with other reports. Submit each type of report as a separate document.

If you have any questions, please contact Mr. Peter Raftery at (213) 576-6724 or Ms. Su Han at (213) 576-6735.

Sincerely,


Tracy J. Egoscue
Executive Officer

Enclosures

1. Board Resolution, No R08-001;
2. Board Order, No R4-2008-001;
3. Monitoring and Reporting Program; and
4. Standard Provisions Applicable to Waste Discharge Requirements

cc: See Mailing List

California Environmental Protection Agency



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Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

BOE-C6-0056669

Mr. Giraudi
TRC Solutions, Inc.
Former International Light Metals

March 20, 2008

Mailing List

United States Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
Jeffrey Dhont, United States Environmental Protection Agency, Region 9
John Youngerman, State Water Resources Control Board, Division of Water Quality
Department of Fish and Game, Region 5
Kurt Souza, State Department of Health Services, Drinking Water Field Operations Branch
Tom Cota, Department of Toxic Substances Control, Cypress
Brian Hooper, Los Angeles County Department of Public Works, Waste Management Division
Carl G. Brooks, South Coast Air Quality Management District
Ted Johnson, Water Replenishment District of Southern California
Cheryl Ross, West Basin Municipal Water District
Mark Stuart – Central Basin, California Department of Water Resources
National Resources Defense Council
Los Angeles County Department of Health Services, Environmental Health
Alex P. Carlos, Regional Water Quality Control Board, Region 4
Ravi Subramanian, CDM
Joseph Weidmann, Haley & Aldrich

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BOE-C6-0056670

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

RESOLUTION NO. R08-001

APPROVING THE ENVIRONMENTAL CHECKLIST AND
ADOPTING A MITIGATED NEGATIVE DECLARATION FOR A
PILOT STUDY TO EVALUATE REMEDIATION OF VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER BY ENHANCED IN-SITU BIOREMEDIATION WITH
BIOAUGMENTATION, FORMER INTERNATIONAL LIGHT METALS FACILITY,
TORRANCE, CALIFORNIA
(FILE NO. 06-001)

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region finds that:

1. California Water Code (CWC) section 13260(a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community wastewater collection system, which could affect the quality of the waters of the State, shall file a report of waste discharge (ROWD) with the Regional Water Quality Control Board (Regional Board) exercising jurisdiction in the area, and that the Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes. The Department of Toxic Substances Control is the lead regulatory agency for the site. The Regional Board is providing Waste Discharge Requirements (WDR), and oversight and enforcement of the WDR.
2. The site operated as International Light Metals (ILM), under various owners, from World War II until 1992. The former ILM facility was located at 19200 South Western Avenue, in Torrance, California (Figures 1 and 2). The Facility is bounded by 190th Street to the north, industrial buildings and the former Boeing C-6 facility to the east, industrial buildings and Francisco Street to the south, and Western Avenue to the west. When used by ILM the property consisted of approximately 67.4 acres. The ILM buildings were demolished during 1996 and 1997. The land was vacant until 1997, when three warehouses were built on 55 acres of the property. In 2001-2002, two additional warehouses were built on the remaining 12.4 acres. The site is fully developed with warehouse/distribution buildings and offices.
3. International Light Metals was a metal processor that used, stored, and/or treated hazardous materials and waste during their routine operations. Hazardous substances included hydrocarbon fuels, chlorinated solvents, acids, caustics, and other materials. It is believed that the release of hazardous substances to the environment occurred during routine operations.
4. Soil and groundwater beneath the Site are contaminated with perchloroethene (PCE), trichloroethene (TCE), other volatile organic compounds at lower concentrations, and hexavalent chromium.
5. Groundwater typically occurs between approximately 63 and 78 feet below ground surface (bgs) in the "Upper Sand" of the Bellflower aquiclude at the site. The groundwater depth varies seasonally and with location at the site. Where the electron donor injection is planned (70 to 115 feet bgs), hydrostratigraphic cross sections of the site indicate aquifer materials

range from sand to sandy clay. This area of aquifer is isolated from the underlying Gage aquifer by a clayey zone. The Regional Board well database indicates that the nearest groundwater production well is slightly more than 1 mile north (up gradient) of the site.

6. Because of the limited size (15 feet by 60 feet) and controlled nature of this project there is no potential for this pilot test to adversely affect water supply wells.
7. TRC Solutions, Inc. proposes to inject an electron donor amendment and a bioaugmentation culture into groundwater beneath the site. The electron donor amendment will consist of a soy oil in water emulsion with the option to include a sodium lactate solution, and/or HRC-A. HRC-A is a compound which incorporates lactic acid and fatty acids. The HRC-A is intended to provide an additional long term electron source. The bioaugmentation culture consists of non-pathogenic, naturally derived, trichloroethylene-degrading *Dehalococcoides ethenogenes* culture (referred to as BCI-e™, and sold by Bioremediation Consulting Inc. of Watertown, Massachusetts).
8. The injection will occur in the existing pilot test area using existing injection wells RW-1, RW-2, RW-3, RW-4 and RW-5 with possible annual reinjections. Initially, approximately 260 gallons of soy oil emulsion mixed with 2,600 gallons of tap water will be injected with approximately 655 pounds of a nitrate and phosphate nutrient. The injection is expected to take approximately 1 day. The nutrient will either be mixed with the soy oil emulsion and injected or diluted prior to mixing with the soy oil emulsion. If additional or alternative sources are injected they would consist of similar quantities of sodium lactate solution or HRC-A. There are no plans for alternate electron donors at this time. Injection pressure will remain below 20 pounds per square inch, and the injection flow rate is expected to be between 5 and 25 gallons per minutes. Approximately 1 to 3 months following electron donor injection, after reducing conditions have been achieved, approximately 1 gallon of BCI-e™ dehalogenating microorganisms amendment will be placed in each of the five injection wells. The BCI-e™ injection is expected to take approximately 1 day.
9. Details of the proposed pilot study are included in *Revised Pilot Test Workplan Corrective Measure 4 – In Situ Bioaugmentation*, dated September 2005, prepared by TRC Solutions. This document was approved by the DTSC in a letter dated November 4, 2005, with concurrence by the Regional Board in a letter dated January 9, 2006.
10. Groundwater beneath the Site is unconfined and the direction of flow varies across the Site but is generally toward the south. The Discharger shall monitor for the presence and concentration of injection solution and contaminants and evaluate flow conditions and any potential for migration of contaminants outside the treatment area. As specified in the Waste Discharge Requirements and Notice of Preparation of Mitigated Negative Declaration, the Discharger will inject hydrogen peroxide solution, if necessary, to stop the bioremediation and prevent offsite migration of unintended deleterious byproducts.
11. The application of electron donor amendment and bioaugmentation cultures to groundwater may result in temporary adverse impacts to groundwater quality, but impacts that may result will be localized, and of short duration, and will not impact any existing or prospective uses of groundwater.

12. The Water Quality Control Plan (Basin Plan) for the Los Angeles Region designates the beneficial uses of groundwater in the Central Basin for municipal and domestic supply, industrial process supply, industrial service supply, and agricultural supply.
13. The permitted discharge is consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharge may result in some localized exceedance of background concentrations of constituents such as total organic carbon, VOCs, and total dissolved solids (TDS), but this is not anticipated to result in any long-term groundwater degradation.
14. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations. The Regional Board, in a public meeting on March 6, 2008, heard and considered all comments pertaining to the discharge and to the tentative requirements.
15. The Department of Toxic Substances Control is lead regulatory agency for the site. This Regional Board has assumed lead agency role only for preparation of the Waste Discharge Requirements for this project under the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study (in the format of an expanded Environmental Checklist) in accordance with Title 14, California Code of Regulations, section 15063, titled Guidelines for Implementation of the California Environmental Quality Act. Based on the Initial Study, Regional Board staff prepared a Mitigated Negative Declaration documenting that the project will not have a significant adverse effect on the environment.
16. Copies of the Environmental Checklist and proposed Mitigated Negative Declaration were transmitted to the State Clearing House, all agencies and interested parties. All comments received have been addressed by Regional Board staff. The Regional Board considered all testimony and evidence at a public hearing held on March 6, 2008, at the City of Simi Valley Council Chambers, 2929 Tapo Canyon Road, Simi Valley, California, and good cause was found to approve the Environmental Checklist and adopt a Mitigated Negative Declaration.
17. The Regional Board has reviewed the Initial Study and Mitigated Negative Declaration concerning this Resolution prepared by staff in compliance with the California Environmental Quality Act (Public Resources Code section 21000 et seq.). The Regional Board concurs with the staff findings that a Mitigated Negative Declaration should be adopted. The Initial Study and Mitigated Negative Declaration were circulated for public review and comment.

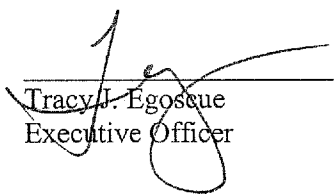
THEREFORE, BE IT RESOLVED that the Regional Board:

1. Adopts the Environmental Checklist, Initial Study and Mitigated Negative Declaration and directs the Executive Officer to file a Notice of Determination with the State Clearinghouse within 30 days as required by the California Code of Regulations.
2. Directs that a copy of this Resolution shall be forwarded to the State Water Resources Control Board and all interested parties.

3. Directs that the discharge of amendments and microorganisms into the soil and groundwater shall conform with all the requirements, conditions, and provisions set forth in A. *"Discharge Limits"* and B. *"Discharge Specifications"* of the ORDER NO. R4-2008-0009.

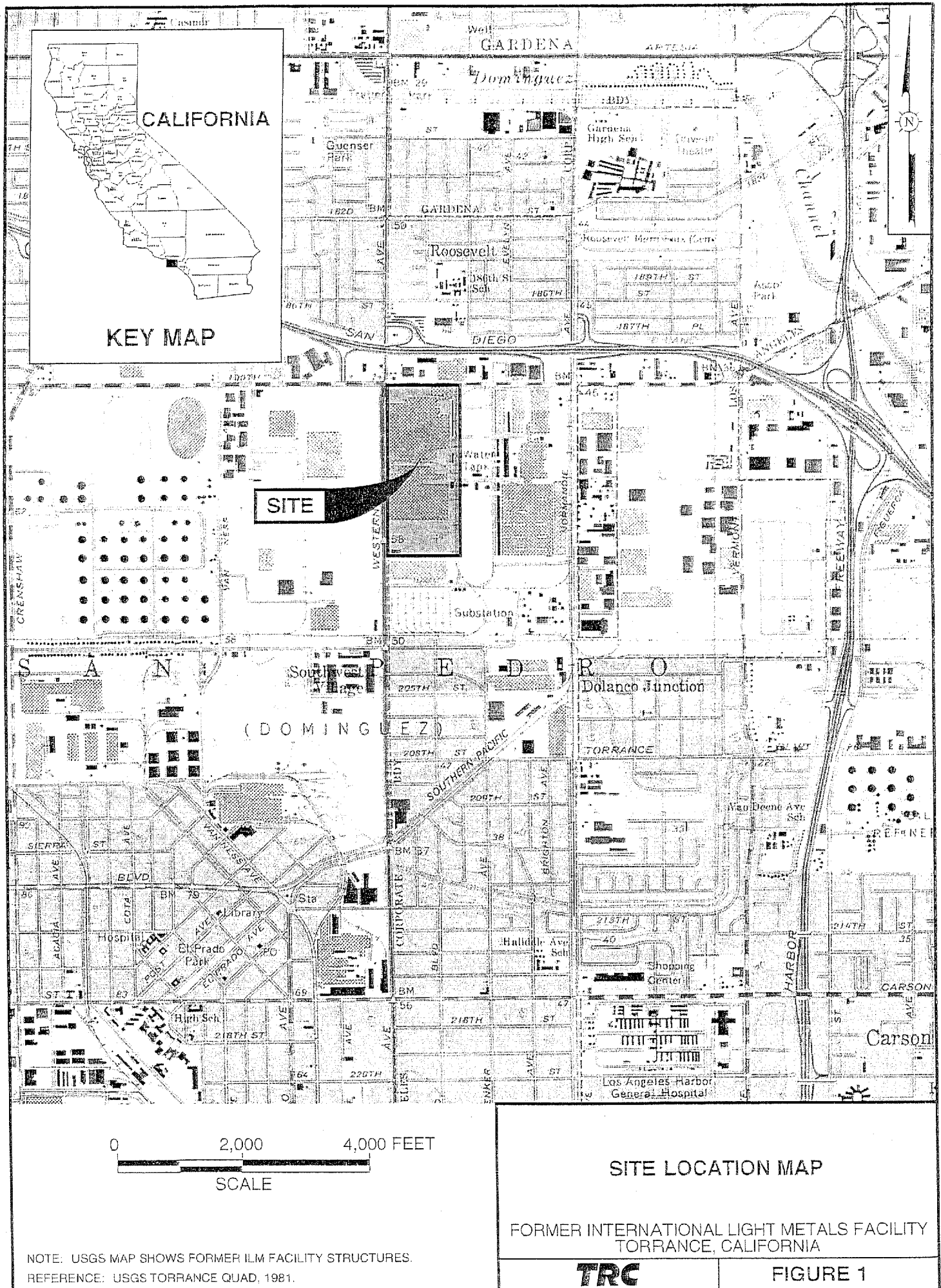
CERTIFICATION

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region on March 6, 2008.

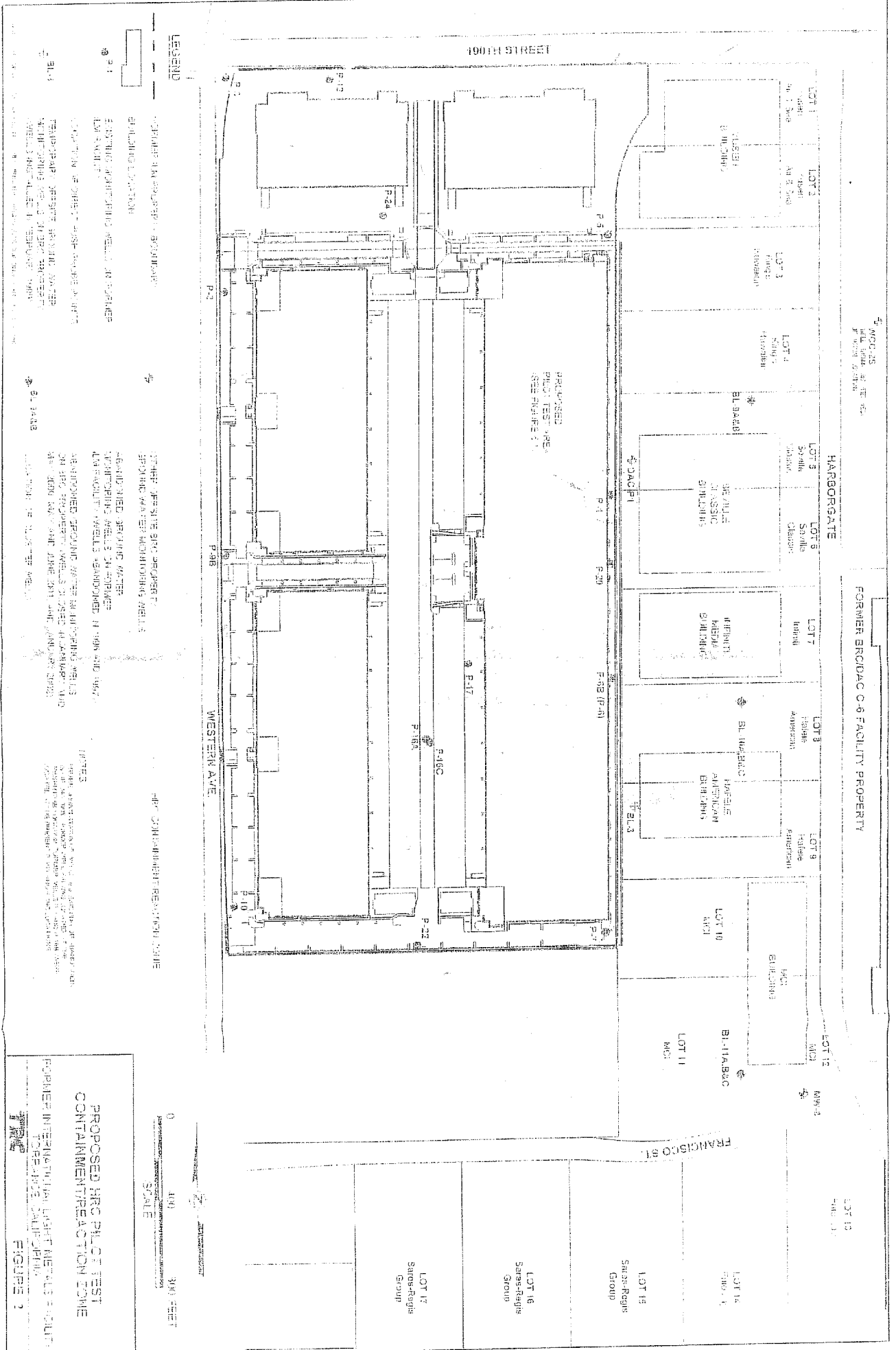


Tracy J. Egoscue
Executive Officer

March 6, 2008
Date



COMMERCE BANC/DA C-6 QUALITY PROPERTIES



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2008-0009

**WASTE DISCHARGE REQUIREMENTS
FOR
FORMER INTERNATIONAL LIGHT METALS FACILITY
PILOT STUDY TO EVALUATE IN-SITU BIOAUGMENTED BIOREMEDIATION OF
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**

(FILE NO. 06-001)

The California Regional Water Quality Control Board, Los Angeles Region, (hereafter Regional Board) herein finds that:

1. TRC Solutions, Inc. (hereafter Discharger) has filed a Report of Waste Discharge and applied for Waste Discharge Requirements to conduct a pilot study to evaluate the potential of using bioaugmented bioremediation to destroy chlorinated volatile organic compounds (VOCs) in shallow groundwater at the former International Light Metals site (Site) identified below. The Department of Toxic Substances Control is the lead regulatory agency for the site. The Regional Board is providing the Waste Discharge Requirements (WDR), and will enforce the monitoring requirements.
2. The land is owned by Sunshine Distribution LLC, and the responsible party for the remediation of contaminated soil and groundwater is TRC Solutions, Inc., of Irvine, California. TRC entered into a Liability Transfer Agreement with Lockheed Martin in 1999, and TRC is responsible for remediation under the Waste Discharge Requirements.
3. The site operated as International Light Metals (ILM), under various owners, from World War II until 1992. The former ILM facility was located at 19200 South Western Avenue, in Torrance, California (Figures 1 and 2). The Facility is bounded by 190th Street to the north, industrial buildings and the former Boeing C-6 facility to the east, industrial buildings and Francisco Street to the south, and Western Avenue to the west. When used by ILM the property consisted of approximately 67.4 acres. The ILM buildings were demolished during 1996 and 1997. The land was vacant until 1997, when three warehouses were built on 55 acres of the property. In 2001-2002, two additional warehouses were built on the remaining 12.4 acres. The site is fully developed with warehouse/distribution buildings and offices.
4. International Light Metals was a metal processor that used, stored, and/or treated hazardous materials and waste during their routine operations. Hazardous substances included hydrocarbon fuels, chlorinated solvents, acids, caustics, and other materials. It is reported that the release of hazardous substances to the environment occurred during routine operations.
5. Shallow groundwater beneath the Site is first encountered at depths ranging from approximately 63 to 78 feet below ground surface, in the "Upper Sand" of the Bellflower Aquitard. Shallow groundwater is unconfined and occurs within the Bellflower Aquitard. The Gage Aquifer is present beneath the Bellflower Aquitard. The Bellflower Aquitard comprises the upper portion of the Lakewood Formation and generally occurs from land surface to depths of approximately 125 to 145 feet beneath the Site and appears to be laterally continuous across the Site. The Bellflower Aquitard is comprised primarily of a heterogeneous mixture of low permeability silts and clays, with lenses and layers of sandy or gravelly clay, silty sand, and sand identified in some areas. The Bellflower Aquitard is known to have relatively low hydraulic conductivities. Regional groundwater supply wells are not screened in and do not produce

from this unit. The upper 20 to 60 feet of the upper Bellflower below the Site consists of fine-grained soils (predominantly fine sands, silts, and clays) which thicken to the east. A sandy zone (Middle Bellflower Sand) that dips downward to the east underlies the fine-grained soils. The Middle Bellflower Sand is generally 60 to 100 feet thick and is a massive, light yellowish brown, fine to medium-grained sand with discontinuous layers of silt and clay that dip downward to the east.

6. The groundwater gradient at the site is low, with a typical calculated gradient of 0.001 foot/foot. The calculated seepage velocity is 0.046 feet per day. The apparent groundwater flow direction is to the southeast. The relationship between the groundwater flow and the pilot test area wells is shown in Figure 3.
7. The Dominguez Channel is the nearest surface water body. The channel is approximately 1.3 miles to the east (Figure 1).
8. All soil and groundwater assessment and remediation have been conducted under the direction of the Department of Toxic Substances Control.
9. Soil and groundwater assessment were initiated as part of property redevelopment activities.
10. Soil remediation occurred concurrently with building demolition in 1995 and 1996.
11. Onsite groundwater assessment began in 1994. Offsite groundwater assessment began in 1999.
12. A groundwater remediation pilot test, using Hydrogen Release Compound, was conducted from May 2006 to May 2007. The test results indicated that dehalogenating microorganisms were not present in sufficient numbers to successfully destroy the volatile organic compounds in groundwater.
13. The Discharger has conducted numerous phases of soil and groundwater investigations related to Site operations with the oversight of the DTSC since 1994. The Discharger submitted soil and groundwater investigation reports to the DTSC. The investigations consisted of drilling and sampling several hundred borings and analyzing several thousand soil samples. Forty onsite and 22 offsite groundwater monitoring wells have been installed. There are currently 26 onsite monitoring wells and 15 offsite monitoring wells. There have been more than 20 groundwater monitoring events.
14. Soil and groundwater beneath the Site are contaminated with perchloroethene (PCE), trichloroethene (TCE), other volatile organic compounds at lower concentrations, and hexavalent chromium. A map showing the TCE plume at the Site is attached as Figure 4.
15. The Discharger remediated soil in 1995 and 1996 by targeted excavation with offsite disposal, and by using soil vapor extraction in certain areas.
16. Within one mile of the Site, there is one active water supply well (Well 3S14W25P04) located approximately one mile north of the Site (Figure 1). This well is owned by California Water Service Company. Available well construction information indicates that this well is screened in the Silverado aquifer between 544 and 751 feet below ground surface. The latest production data (2005) indicates annual production of just over 478 acre feet. Water quality data from this well was not available.

17. The Discharger submitted the "Revised Pilot Test Workplan Corrective Measure 4 – In Situ Bioaugmentation" dated September, 2005, prepared by TRC Solutions. Approved by the DTSC in a letter dated November 4, 2005, with concurrence by the Regional Board in a letter dated January 9, 2006. The TRC Solutions Work Plan presents the rationale and procedures for pilot-scale implementation of enhanced in-situ bioremediation at the subject pilot test area at the Site. The Discharger proposed to conduct a pilot study in order to evaluate the effectiveness of in-situ remediation of dissolved chlorinated VOCs, primarily PCE and TCE, in the groundwater beneath the Site.
18. The proposed pilot test study will consist of the injection of an electron donor into existing injection wells RW-1, RW-2, RW-3, RW-4, and RW-5, with possible annual reinjections. The electron donor injection is expected to take approximately 1 day. Initially, approximately 260 gallons of soy oil emulsion mixed with 2,600 gallons of tap water will be injected with approximately 655 pounds of a nitrate and phosphate nutrient. The nutrient will either be mixed with the soy oil emulsion and injected or diluted prior to mixing with the soy oil emulsion. If additional or alternative sources are injected they would consist of similar quantities of sodium lactate solution or HRC-A. There are no plans for alternate electron donors at this time. Injection pressure will remain below 20 pounds per square inch, and the injection flow rate is expected to be between 5 and 25 gallons per minutes. Approximately 1 to 3 months following electron donor injection, after reducing conditions have been achieved, approximately 1 gallon of BCI-e™ dehalogenating microorganisms amendment will be placed in each of the five injection wells. The BCI-e™ injection is expected to take approximately 1 day.
19. The Discharger may elect to inject the amendments again after 1 year as noted in the Workplan. The Regional Board must be notified at least 30 days prior to this second injection event.
20. If electron donor/carbon source amendment and/or Dehalococcoides ethenogenes (DHE) associated with the bioaugmentation culture are detected in monitoring points outside the treatment zone (in wells PTM-1A&B through PTM-3A&B) a control measure would be implemented to control their movement. The measure would include injecting a 3% to 5% hydrogen peroxide in water solution into the shallow aquifer to rapidly through existing wells to change aquifer conditions from anaerobic to aerobic, killing the injected organisms. The bioaugmentation culture (BCI-e™) requires an electron donor/carbon source amendment (food), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive when food is removed and aerobic conditions are created.
21. Any injection of a solution into the groundwater is a discharge of waste as defined by the California Water Code. However, the discharge of the electron donor/carbon source solution with bioaugmentation culture is intended to provide more effective remediation of chlorinated VOC-impacted groundwater and is expected to significantly reduce the anticipated Site cleanup time as compared to other technologies or in-situ bioremediation without addition of a bioaugmentation culture.
22. The application of electron donor/carbon source amendment and bioaugmentation cultures to groundwater may result in temporary adverse impacts to groundwater quality, but impacts that may result will be localized, and of short-term duration, and will not impact any existing or prospective uses of groundwater.
23. The Regional Board adopted a revised Water Quality Control Plan (Plan) for the Los Angeles Region on June 13, 1994. The Plan contains beneficial uses and water quality objectives for the Central Groundwater Basin. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Plan.

24. The beneficial uses for the Central Groundwater Basin are municipal and domestic water supply, industrial service and process supply, and agricultural supply.
25. The permitted discharge is consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharge may result in some localized temporary exceedances of background concentrations of total organic carbon, iron, manganese, arsenic, TDS, and certain microorganisms. However, after the injection of amendments, these parameters are not anticipated to exceed the primary or secondary standards to the extent that these parameters do not already exceed the respective standard. Moreover, any parameter change resulting from the discharge:
 - a. Will be consistent with maximum benefit to the people of the State.
 - b. Will not unreasonably affect present and anticipated beneficial uses of such water, and
 - c. Will not result in water quality less than that prescribed in the Water Quality Control Plan for Central Groundwater Basin.
26. The DTSC is lead agency for this site. However, the Regional Board has assumed lead agency role for preparation of the Waste Discharge Requirements for this project under the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study in accordance with section 15063 of the "State CEQA Guidelines" at California Code of Regulations, title 14, section 15000 et seq. Based upon the Initial Study, the Regional Board prepared a Mitigated Negative Declaration that the project, as mitigated, will not have a significant adverse effect on the environment.
27. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written comments and recommendations. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that TRC Solutions, Inc., in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

A. Discharge Limits

1. The Discharger shall not cause the groundwater outside of the treatment area (as defined by the upgradient and downgradient wells in Figure 3) to exceed background concentrations of chloride and TDS established prior to start of remediation.
2. The discharge of the electron donor amendment solution into the groundwater shall be only performed while this Order is in force.
3. During this remediation, the injection volume of electron donor amendment solution of soy oil emulsion in tap water shall not exceed 10,000 gallons, unless approved in writing in advance by the Executive Officer.
4. Discharge duration shall not exceed two years, unless approved in writing in advance by the Executive Officer.

5. The amendment solution shall be limited to potable water, extracted groundwater, and amendments specified in the pilot study work plans as approved. The amendments will consist of a mixture of tap water with emulsified soy oil at a maximum concentration of up to 10% (100,000 mg/L). In addition, biological cultures (BCI-e™ culture) will be introduced into the groundwater for a maximum of two separate events during the pilot study at concentration not to exceed 1,000,000 cells/ml.

B. Discharge Specifications

1. The Discharger shall not cause the electron donor amendment solution and the by-products of the bioremediation process to migrate outside of the treatment area established by the Discharger and approved by the Executive Officer.
2. The Discharger shall stop further addition of amendments to the groundwater if the electron donor amendment solution is observed to be migrating outside of the treatment area. Once this control measure has been implemented, if the remaining amendments in the groundwater fail to naturally break down, a hydrogen peroxide solution shall be injected to destroy the carbon source and cause the groundwater system to return to more aerobic conditions.
3. The discharge of the electron donor amendment solution or any by-products into any surface water or surface water drainage course is prohibited.
4. The Discharger shall not cause the groundwater to contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses outside the treatment area.
5. The Discharger shall not cause the groundwater to contain concentrations of chemical substances or its by-products, including the electron donor amendment solution, in amounts that adversely affect any designated beneficial use as a result of the injection of solution.
6. The Discharger shall implement hydraulic control to prevent off-site migration if necessary.

C. Provisions:

1. This Order includes the attached "Standard Provisions Applicable to Waste Discharge Requirements," which are incorporated herein by reference. If there is any conflict between provisions stated herein before and the attached "Standard Provisions," those provisions stated herein shall prevail.
2. Discharge of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.
3. In the event of any change in name, ownership, or control of the Site, the Discharger shall notify this Regional Board in writing and shall notify any succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Regional Board.
4. A copy of these requirements shall be maintained at an on-site office and be available at all times to operating personnel.
5. In accordance with section 13260 of the California Water Code, the Discharger shall file a report of any material change or proposed change in the character, location or volume of discharge.

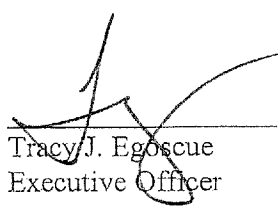
6. The Discharger shall notify Regional Board immediately by telephone of any adverse condition resulting from this discharge or from operations producing this waste discharge, such notifications to be affirmed in writing within one week from the date of such occurrence.
7. This Regional Board considers the property operator and owner to have continuing responsibility of correcting any problem that may arise in the future as a result of this discharge.
8. All work must be performed by or under the direction of a registered civil engineer, registered geologist, or certified engineering geologist. A statement is required in all technical reports that the registered professional in direct responsible charge actually supervised or personally conducted all the work associated with the project.
9. The use of an electron donor amendment shall not cause a condition of pollution or nuisance as defined by California Water Code, section 13050.
10. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as specified in the attached Monitoring and Reporting Program No. CI-9016. Violations of any conditions may result in enforcement action, including Regional Board or Court Order requiring corrective action or imposition of civil monetary liability, or revision, or rescission of the Order.
11. This Order does not exempt the Discharger from compliance with any other laws, regulations, or ordinances, which may be applicable. This Order does not legalize the waste treatment Site, and leaves unaffected any further restraints on the Site that may be contained in other statutes or required by other agencies.
12. The Discharger shall cleanup and abate the effects of injecting amendment solution as specified in this Order, including extraction of any by-products which adversely affect beneficial uses, and shall provide an alternate water supply source for municipal, domestic or other water use wells that become contaminated in excess of water quality objectives as a result of the planned injection.
13. In accordance with section 13263 of the California Water Code, these requirements are subject to periodic review and revision by this Regional Board.
14. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:
 - a. Violation of any term or condition contained in this Order.
 - b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts.
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of authorized discharge.
15. The Regional Board, through its Executive Officer, will modify the Monitoring and Reporting Program, as necessary. The California Environmental Quality Act (CEQA) initial study and associated public comment were conducted once as part of the Waste Discharge Requirement (WDR) permit application process and will not be required for the expansion or modification of this remediation program.

D. Expiration Date

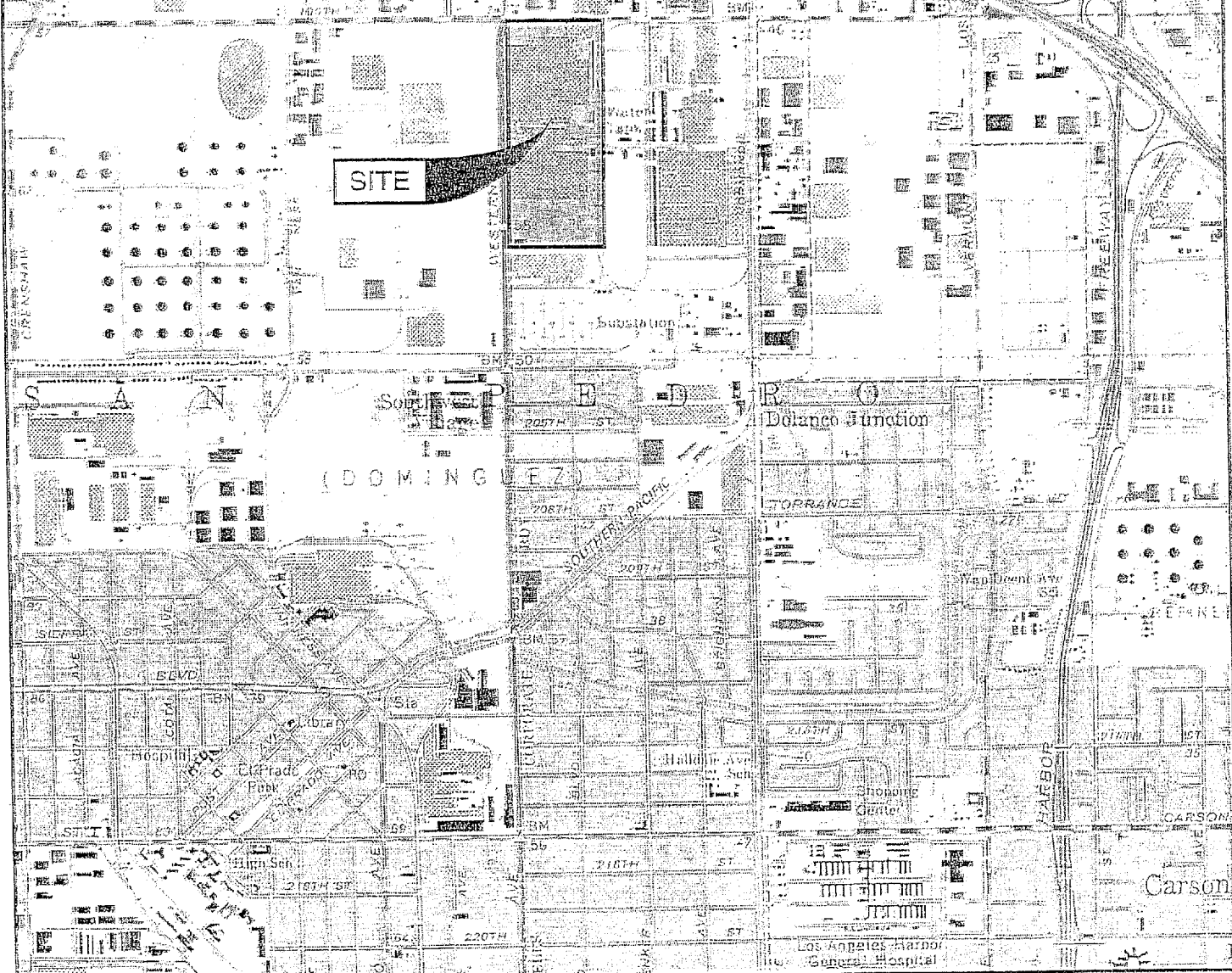
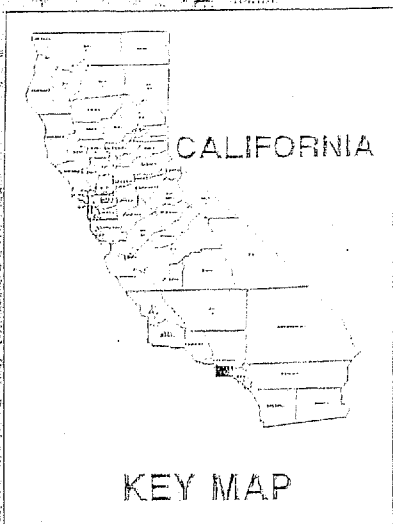
This Order expires on March 6, 2013.

The Discharger must file a Report of Waste Discharge in accordance with title 27, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Tracy J. Egoscue, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on March 6, 2008.



Tracy J. Egoscue
Executive Officer



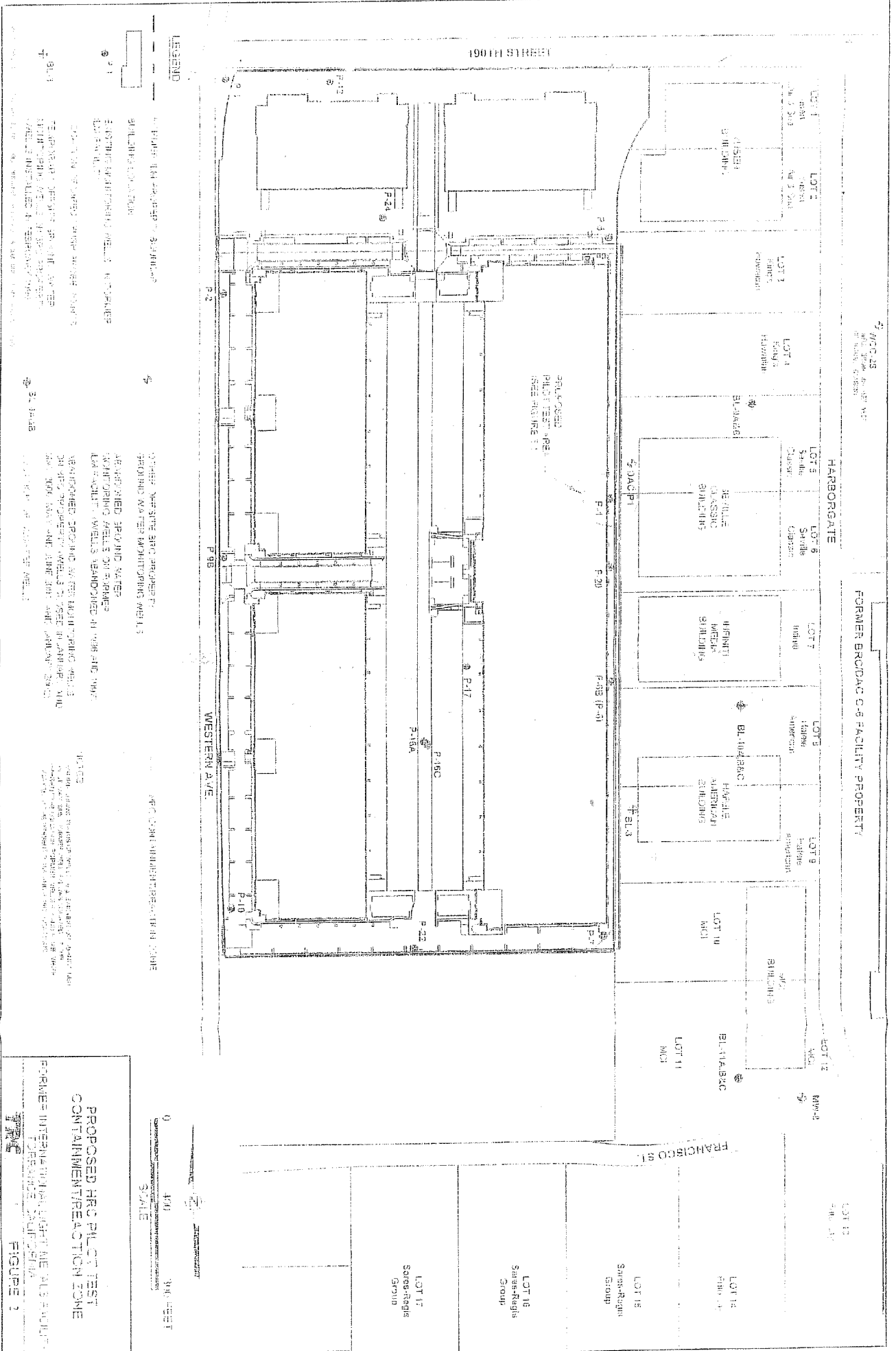
SITE LOCATION MAP SHOWING
NEAREST ACTIVE WATER SUPPLY WELL

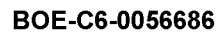
FORMER INTERNATIONAL LIGHT METALS FACILITY
TORRANCE, CALIFORNIA

TRC

FIGURE 1

REPORTED BY: C. E. GUNN, JR. SUBJECT:





STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

- (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

Standard Provisions Applicable to
Waste Discharge Requirements

- (b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
- (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
- (d) Increase in flow beyond that specified in the waste discharge requirements.
- (e) Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of these requirements shall not be affected. [CWC Section 921]

Standard Provisions Applicable to
Waste Discharge Requirements

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 13271(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

Standard Provisions Applicable to
Waste Discharge Requirements

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40 CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

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15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGES TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Officer within 24 hours:

- (a) Any bypass from any portion of the treatment facility.
- (b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- (c) Any treatment plant upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used

Standard Provisions Applicable to
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to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurements;
- (b) The individual(s) who performed the sampling or measurements;
- (c) The date(s) analyses were performed;
- (d) The individual(s) who performed the analyses;
- (e) The analytical techniques or method used; and
- (f) The results of such analyses.

19. (a) All application reports or information to be submitted to the Executive Officer shall be signed and certified as follows:
- (1) For a corporation — by a principal executive officer or at least the level of vice president.
 - (2) For a partnership or sole proprietorship — by a general partner or the proprietor, respectively.
 - (3) For a municipality, state, federal, or other public agency — by either a principal executive officer or ranking elected official.
- (b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this provision.
 - (2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
 - (3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

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"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plant shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program. [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. CI-9016
FOR
FORMER INTERNATIONAL LIGHT METALS FACILITY**

FILE NO. 06-001

The Discharger shall implement this monitoring and reporting program on the effective date of this Order.

I. GROUNDWATER MONITORING PROGRAM

It is anticipated that the pilot test will be initiated in the second quarter of 2008. Figures 1, 2, and 3 show the location of the site and wells. Monitoring of the bioaugmented groundwater remediation pilot test shall consist of samples collected from one monitoring well up gradient of the project area (P-1), one dual-screened monitoring well within the injection area (PTM-1A/B), and two dual-screened monitoring wells down gradient of the injection area (PTM-2A/B, and PTM-3A/B). Injection wells RW-1, RW-2, RW-3, RW-4, and RW-5 will be the injection wells. Following the collection of baseline groundwater all of the monitoring wells shall be monitored in accordance with the following program:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injections	Liters or Gallons	Measurement	Per injection
Groundwater Elevation	Feet below ground surface (bgs)	In situ	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter
Field Parameters (Dissolved Oxygen, Oxidation-Reduction Potential, pH, Temperature, Specific Conductance, and Turbidity)	mg/l, millivolts, pH units, degrees C, μ S/cm, and NTU, respectively	Grab	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	μ g/l	Grab	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter
Total Organic Carbon (EPA Method 9060 Modified) and Volatile Fatty Acids	mg/l	Grab	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter
Dissolved Metals (Ferrous Iron by field kit), Alkalinity, and Anions (sulfate, nitrate, nitrite and chlorides)	mg/l	Grab	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter
Dissolved Hydrocarbon Gases (ethane, ethene, and methane)	mg/l	Grab	<ul style="list-style-type: none">• Baseline prior to injection• Monthly first through third months• Quarterly thereafter

All groundwater monitoring reports must include, at minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification; and
- c. Semi-annual observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

II. REPORTING REQUIREMENTS

The first quarterly monitoring report under this Program is due by August 1, 2008. Baseline monitoring data must be included in this first quarterly report. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	May 1
April – June	August 1
July – September	November 1
October – December	February 1
Annual Summary Report	March 1 of each year beginning in 2009

If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

Whenever wastes associated with the discharge under this Order are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.

III. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the _____ day of _____ at _____.

(Signature)

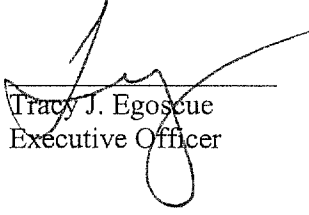
(Title)"

V. MONITORING FREQUENCIES

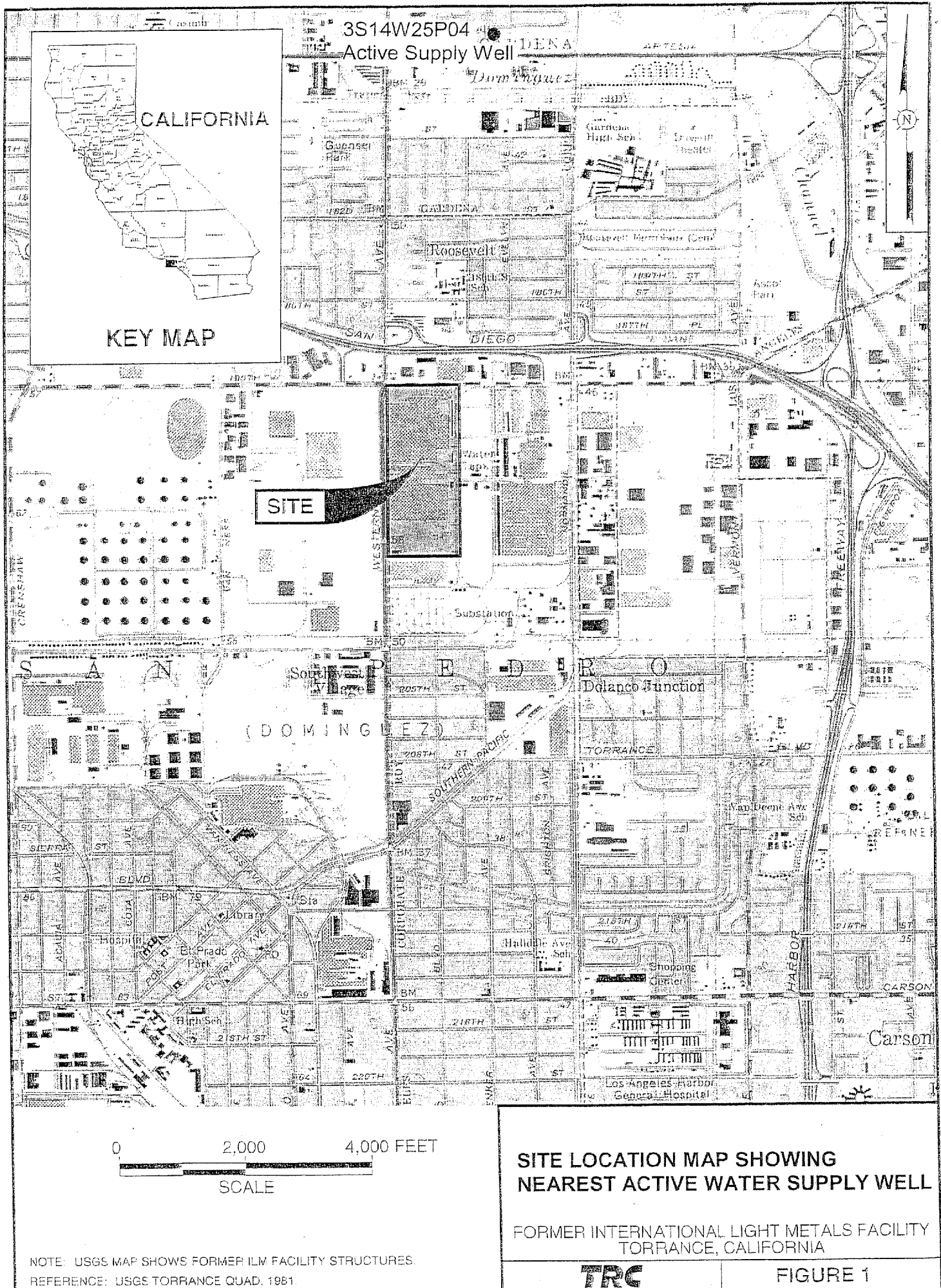
Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by:


Tracy J. Egoscue
Executive Officer

Date: March 6, 2008



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